

(NON-CONVENTION—Company)

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FORM 7—REGULATION 12(1)

COMMONWEALTH OF AUSTRALIA

PATENTS ACT, 1952-1973

DECLARATION IN SUPPORT OF AN APPLICATION FOR A PATENT.

(a) Here insert (in full)
Name of Company. In support of the Application made by (a)
CLIVE INVESTMENTS PTY LIMITED

(hereinafter referred to as "Applicant") for a patent for an invention entitled:
(b) Here insert Title of invention. (b) "FOLDING-DOOR SUSPENSION TROLLEY"

(c) Here insert Full
Name and Address of
Company Official
authorised to make of
declaration. I, (c) John Clive COWDROY
of 192 Condamine Street, Balgowlah

do solemnly and sincerely declare as follows:

1. I am authorised by Applicant to make this declaration on its behalf.

2. (d) JOHN CLIVE COWDROY
of 192 Condamine Street, Balgowlah, New South Wales.

is/are
the actual inventor(s) of the invention and the facts upon which Applicant is
entitled to make the Application are as follows:

Applicant is the Assignee of the said Inventor(s).

Declared at Balgowlah, New South Wales
this 23rd day of November, 1983.

(e) Personal Signature
of Declarant (c) (no
seal, witness or
legalisation).

To THE COMMISSIONER OF PATENTS.

REGULATION 9COMMONWEALTH OF AUSTRALIAPATENTS ACT 1952APPLICATION FOR A STANDARD PATENT

COMPLETE AFTER PROVISIONAL SPECIFICATION No. 35477/84

We, CLIVE INVESTMENTS PTY. LIMITED, a Company incorporated under the Laws of the State of New South Wales, Commonwealth of Australia, of 192 Condamine Street, Balgowlah, New South Wales, Commonwealth of Australia,

2-7-87

hereby apply for the grant of a Standard Patent for an invention entitled:-

"FOLDING-DOOR SUSPENSION TROLLEY"

which is described in the accompanying Provisional Specification.

Our address for service is:-

SHELSTON WATERS,
55 Clarence Street,
SYDNEY. N.S.W. 2000.

DATED this 24th day of November, 1983.

CLIVE INVESTMENTS PTY. LIMITED

by *Robert H. Fletcher*

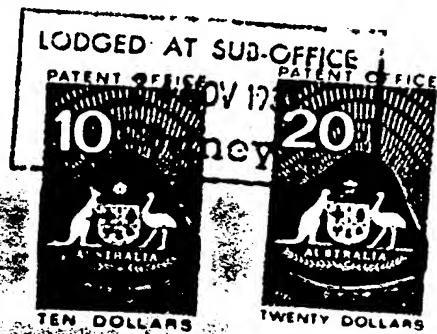
Fellow Institute of Patent Attorneys of Australia
of SHELSTON WATERS

To: The Commissioner of Patents,
WODEN. A.C.T. 2606

File: D.B.106D

Fee: \$30.00

PER STAMP TO VALUE OF	30
ATTACHED	
MAIL OFFICER	



(12) AUSTRALIAN PATENT ABRIDGMENT
(19) AU

(11) AU-B-35477/84

(54) FOLDING-DOOR SUSPENSION
(71) CLIVE INVESTMENTS PTY. LIMITED
(21) 35477/84 564862 (22) 24.11.83
(23) 15.11.84 (24) 24.11.83
(43) 30.5.85 (44) 27.8.87
(51)³ E05D 15/06 E05D 15/40 E05D 15/26
(72) JOHN CLIVE COWDRY
(74) SW
(56) EP 12150
(57) Claim

1. A trolley for the suspension of a folding door panel comprising;

a wheeled body adapted to ride an overhead track;
an upstanding threaded stem engagable with the top edge of said panel to project therefrom;

a tubular journal having a threaded bore to threadedly engage said stem, mounted for rotation within a bearing formed in said wheeled body, and including an axial restraining means to retain said journal in said bearing.

564862

FORM 10

COMMONWEALTH OF AUSTRALIA
PATENTS ACT 1952-69

COMPLETE SPECIFICATION

FOR OFFICE USE:

Class

Int. Class

Application Number: 35477/84.

Lodged:

Complete Specification Lodged:

Accepted:

Published:

Priority:

Related Art:



Name of Applicant: CLIVE INVESTMENTS PTY. LIMITED

Address of Applicant: 192 CONDAMINE STREET,
BALGOWLAH NSW 2093

Actual Inventor: JOHN CLIVE COWDRY

Address for Service: Shelton Waters, 162 Clarence Street, Sydney

Complete Specification for the Invention entitled: "FOLDING-DOOR SUSPENSION TROLLEY"

The following statement is a full description of this invention, including the best method of performing it
Known to me/us:—

Complete of PG2539
of the 24-11-83

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This invention relates to folding doors of the kind consisting of a plurality of upright panels, hingedly joined one to another by their longitudinal upright edges so that they are able to collapse, in linear concertina fashion, for the doorway to be open, or alternatively extended to flatness, or nearly so, for the doorway to be closed.

The door panels are suspended, by their upper ends, on small wheeled trolleys able to ride an overhead track; and, for the panels to be operable in the manner stated above, they have to be hingedly attached to the trolleys so as to be able to rotate about an upright axis.

This necessity for suspension point hinging has been met in the past by each panel, at its upper end, having an upright threaded stem which screws inside a threaded hole in the trolley.

This prior expedient is satisfactory up to a point because it is an easy way of hanging the panel so that it can be connected to the trolley at selected elevational level and the threading is loose enough to act as the required upright hinge. Even so, the prior suspension arrangement is open to objection since the use of loose threading as a hinge is a mis-use of the thread which causes slight elevation variation upon rotation and, with frequent door movement, rapidly wears to the point of having to be renewed.

The object of this invention is to remedy the deficiency noted above.

The present invention consists in a trolley for the suspension of a folding door panel, said trolley comprising:

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a wheeled body adapted to ride an overhead track;

an upstanding threaded stem engagable with the top edge of said panel to project therefrom;

a tubular journal having a threaded bore to threadedly engage said stem, mounted for rotation within a bearing formed in said wheeled body, and including an axial restraining means to retain said journal in said bearing.

An example of the invention is shown in the drawings herewith.

Fig. 1 is a partly-sectioned side elevation of a trolley.

Fig. 2 is an end elevation projected from Fig. 1.

Fig. 3 is a section taken on line 3-3 of Fig. 1.

Referring to the drawings a trolley for suspension of a door panel 4 consists of a wheeled body 5 able to ride an overhead track 6. The door panel 4 has an upright threaded stem 7 which projects upwardly to thread within the bore 8 of a tubular journal 9 freely rotatable within a bearing formed in body 5. Journal 9 is restrained to remain in body 5 by the journal head 10 which has a hexagonal form on its lower end. The purpose of the hexagon is to enable adjustment to be carried out in order to raise or lower the door to correct for elevational levels. The thread in the tubular journal 9 being a plastic material acts as a self locking fit upon the steel upright threaded stem 7 so that having carried out elevational adjustment, this self locking action ensures that the tubular journal 9 remains firmly engaged on the threaded upright 7 so that the rotational movement occurs between the wheeled body 5 and the threaded journal 7.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A trolley for the suspension of a folding door panel comprising;

a wheeled body adapted to ride an overhead track;

an upstanding threaded stem engagable with the top edge of said panel to project therefrom;

a tubular journal having a threaded bore to threadedly engage said stem, mounted for rotation within a bearing formed in said wheeled body, and including an axial restraining means to retain said journal in said bearing.

2. A trolley according to claim 1 wherein said journal is of plastics and is formed to a self-locking fit relative to said stem.

3. A trolley according to claim 1 or claim 2 wherein said axial restraining means comprises an enlarged head having an axial thrust surface adapted to abut a mating surface of said wheeled body.

4. A trolley substantially as herein described with reference to the accompanying drawing.

DATED this 10th day of June, 1987.

CLIVE INVESTMENTS PTY. LIMITED

Attorney: PETER HEATHCOTE
Fellow Institute of Patent Attorneys of Australia
of SHELTON WATERS

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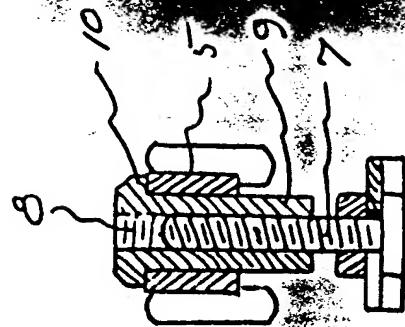


FIG. 3

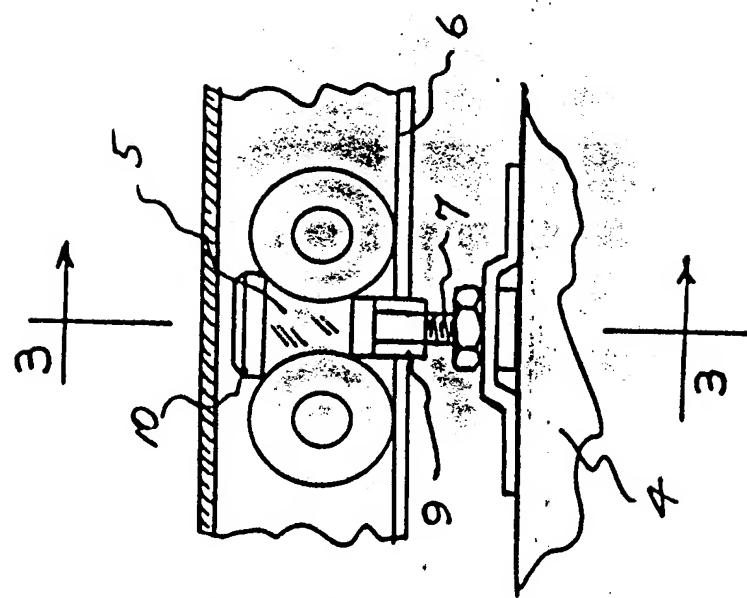


FIG. 1

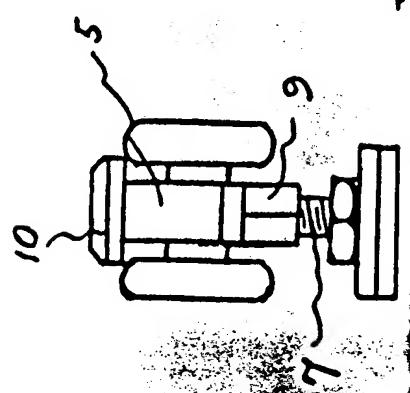


FIG. 2

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APPLICATION IN SUPPORT OF A BASIC APPLICATION APPLICATION FOR A PATENT OR PATENT OF ADDITION

Name(s) of
Applicant(s)

No.
In support of the application made by
PAUL HETTICH GmbH & Co.

PLEASE ADD NAME
AND TITLE OF PERSON

for a patent for an invention entitled

SIGNING, LEGIBLY,
Name(s) and
address(es)
of person(s)
making
declaration

I/We, Wilfried Oepping, In der Horst 66, 4983 Kirchlengern
Rainer Engelke, Mühlenfeldstraße 15, 4980 Biünde

do solemnly and sincerely declare as follows:-

1. I am/we are the applicant(s) for the patent, or am/are authorised by the abovementioned applicant to make this declaration on its behalf.
2. The basic application(s) as defined by Section 141 of the Act was/were made in the following country or countries on the following date(s) by the following applicant(s), namely:-

Country, filing
date and name
of Applicant(s)
for the or
each basic
application

in Germany on 26.Juli 19 88
by Paul Hettich GmbH & Co.

in on 19
by

in on 19
by

3. The said basic application(s) was/were the first application(s) made in a Convention country in respect of the invention/the subject of the application.

4. The actual inventor(s) of the said invention is/are

Reinhard Behring, Oeppingsheide 1, 4983 Kirchlengern 4

5. The facts upon which the applicant(s) is/are entitled to make this application are as follows:-

The applicant is the assignee of the actual inventors.

Name(s) and
addresses
of the or
each actual
inventor

See reverse
side of this
form for
guidance in
completing
this part

X DECLARED at Bünde, Germany this 19th day of January 1990

X Reinhard Oepping
Prokura
Rainer Engelke
Handlungsbefvoilichtiger